

Tuesday, January 17, 2017 11:28:12 AM

Page 1

Quality Control

DAS
44
9-89

DAS
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DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval		
Description Work Order Deviation				Disposition					

Root Cause				FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐		
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐		
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐		
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐		
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐		
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐		
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐		
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐		
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐		
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐		
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____					
Misidentified ☐	Past Due ☐						

Work Order ID 155587

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155587

Page 2

Item ID: D2666-1

Accept

N900040100Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Saddle, LH, Fwd, Aft, In

Start Date: 1/5/2017 Start Qty: 4.00

4

Cust Item ID:

Required Date: 1/17/2017 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start ***NR1***

QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
130	QC8- Inspect parts - second check	0.00							
130									
QC	Memo	0.01							
Quality Control									
140	Chemical Conversion Coat per QSI005 4.1	0.00							
140									
HandFinish	Memo	0.07							
Hand Finishing									
150	White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum	0.00							
150									
Powdercoat	Memo	0.03							
Powder Coating									
	START TIME: 1:40								
	FINISH TIME: 2:10								
	OVEN TEMPERATURE:								

D. 17-02-08

4

0

DAS
08
9-09

(x4)

2017/02/09
BEB.

4

0

17-02-15

DAS
34
9-09

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐	OTHER : _____							
Misidentified ☐	Past Due ☐								

Work Order ID 155587

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155587

Page 3

Item ID: D2666-1**Accept*****N900040100*****Setup Start*****NS1*****Revision ID:****Stop*****NS2*****Item Name:** Saddle, LH, Fwd, Aft, In**Start Date:** 1/5/2017 **Start Qty:** 4.00***4*****Cust Item ID:****Required Date:** 1/17/2017 **Req'd Qty:** 4.00***4*****Customer:****Reference:****Approvals:****Process Plan:** _____**Date:** _____**Tooling:** _____**Date:** _____**Run Start*****NR1*****QC:** _____**Date:** _____**SPC (Y/N):** _____**Date:** _____**Stop*****NR2*****Sequence ID/
Work Center ID****Operation
Description****Set Up/
Run Hours****Tool ID****Tool #****Plan
Code****Accept
Qty****Reject
Qty****Reject
Number****Insp.
Stamp**

160

QC3- Inspect Part Finish

0.00

160

QC

Memo

0.01

Quality Control

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38
9-89
FEB 16 2017

170

Identify as per dwg & Stock Location: 5402

0.00

170

Packaging

Memo

0.01

Packaging

4
FEB 24 2017
DAS
6
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180

QC21- Final Inspection - Work Order Release

0.00

180

QC

Memo

0.07

Quality Control

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9-89
FEB 24 2017DAS
21
9-89
FEB 24 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition		Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
OTHER : _____					

Picklist Print

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Page 1

Work Order ID: 155587

155587

Parent Item: D2666-1

D2666-1

Parent Item Name: Saddle, LH, Fwd, Aft, In

Start Date: 1/5/2017

Required Date: 1/17/2017

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP: C00.11.01Removed P/O for Powder Coat - in house processEC
IPP Rev:D As per Rev D 07-03-19 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D6101-001

Manufactured No

100

Each

49.0000

1

4

DAS

44

9-89

17-02-07

D6101-001

Saddle Billet

Location

Loc Qty

Loc Code

MAT042

49

150689

9

151620

20

*153932

20

4

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date : _____	Step #: _____	QTY Effective : _____		MRB (QS1042) Approval Completed By _____ Lead hand / Supervisor Approval Verification _____ QC / QA Coordinator Approval _____	
Description Work Order Deviation		Disposition			
2AG 2P 28-9					
Root Cause Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐ No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐ Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐ Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐			
		OTHER : _____			

DART AEROSPACE LTD		Work Order: 155587
Description: 206 Saddle, Inboard, Left side		Part Number: D2666-1
Inspection Dwg: D2666 Rev: D DSK: Rev:		Page 1 of 1

FIRST ARTICLE INSPECTION DIMENSION SHEET

Dim	Min	Max	Go/No Go Gauge	Record Actual Dimensions				
				1	2	3	4	5
A	0.100	0.140		.118	.128	.121	.121	
B	0.100	0.140		.120	.119	.117	.117	
C	2.470	2.510		2.492	2.492	2.492	2.492	
D	0.100	0.180		.135	.135	.135	.135	
E	0.210	0.230		.224	.224	.224	.224	
F	1.313	1.343		1.329	1.329	1.329	1.329	
G	0.240	0.260		.253	.253	.253	.253	
H	0.615	0.685		.655	.655	.655	.655	
I	1.125	1.145		1.135	1.135	1.135	1.135	
J	0.990	1.010		1.000	1.000	1.000	1.000	
K	0.235	0.240		.238	.238	.238	.238	
L	0.510	0.515		.512	.512	.512	.512	
M	0.100	0.120		.113	.113	.113	.113	
N	1.565	1.585		1.575	1.575	1.575	1.575	
O	5.990	6.010		5.998	5.998	5.997	5.997	
P	1.245	1.255		1.250	1.250	1.250	1.250	
Q	2.495	2.505		2.500	2.500	2.500	2.500	
R	0.490	0.510		.499	.498	.498	.499	
S	0.312	0.318		.313	.313	.313	.313	
T	2.495	2.505		2.500	2.500	2.500	2.500	
U	1.357	1.367		1.362	1.362	1.362	1.362	
V	0.315	0.322		.316	.316	.316	.316	
W	0.540	0.560		.550	.548	.549	.549	
X	1.674	1.684		1.679	1.679	1.679	1.679	
Y	0.256	0.262		.258	.258	.258	.258	
Z	0.178	0.198		.188	.188	.188	.188	
AA								
AB								
AC								
AD								
AE								

DAS Accept/Reject

Measured by: 9-89	Date: 17-02-08
Audited by: D. O	Date: 17-02-08
Prototype Approval:	Date:

Rev	Date	Change	Revised by	Approved
A		New Issue	RF	
B	99.04.19	Incorporated DSI 9095, DSI 9102 & DSI 9122 Rev. A	RF	
C	99.11.10	Added Dim. R-T	RF	
D	02.12.12	Reformat; Added Dim. U-W & DT8683, DT8686 & DT8695 A/B	KJ/RF	
E	06.06.30	Dimension revised per drawing revision C	KJ/JLM	
F	06.09.19	Reference to DT8888 added to Dim N	KJ/EC	
G	07.03.21	Revised per drawing revision D	KJ/JLM	
H	12.03.08	Dimension S and Y revised	KJ	M

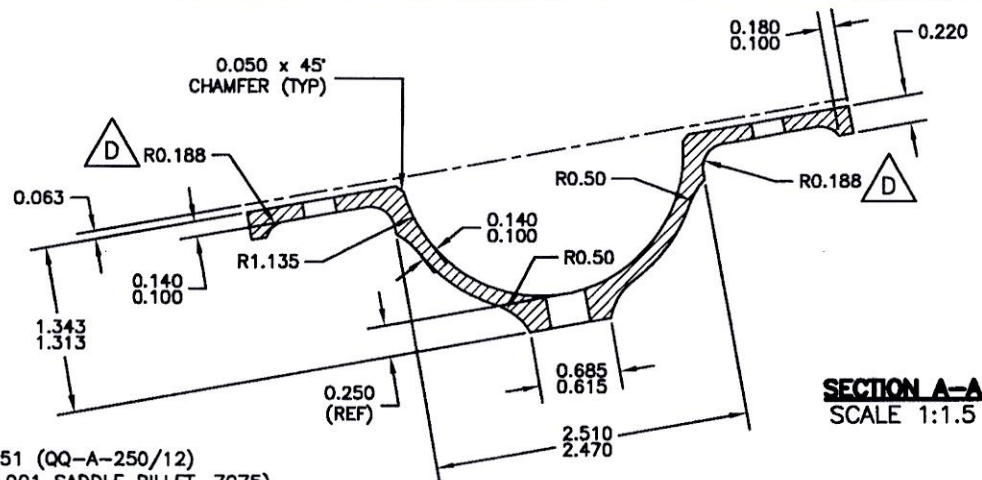
DART

DESIGN #	DRAWN BY CB	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED PH	APPROVED [Signature]	DRAWING NO. D2666	REV. D SHEET 1 OF 1
DATE 06.11.08	TITLE SADDLE FWD INSIDE HIGH		SCALE 1:3
A	97.03.25	NEW ISSUE	
B	97.07.11	ANGLE AND NOTES ADDED	
C	06.05.26	INCORPORATE DEO 9122, 9102, 9095	
D	06.11.08	R0.188 WAS R0.30; Ø0.316 WAS Ø0.313	

RELEASED

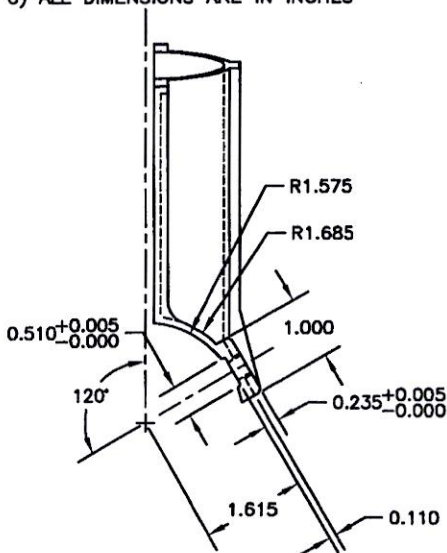
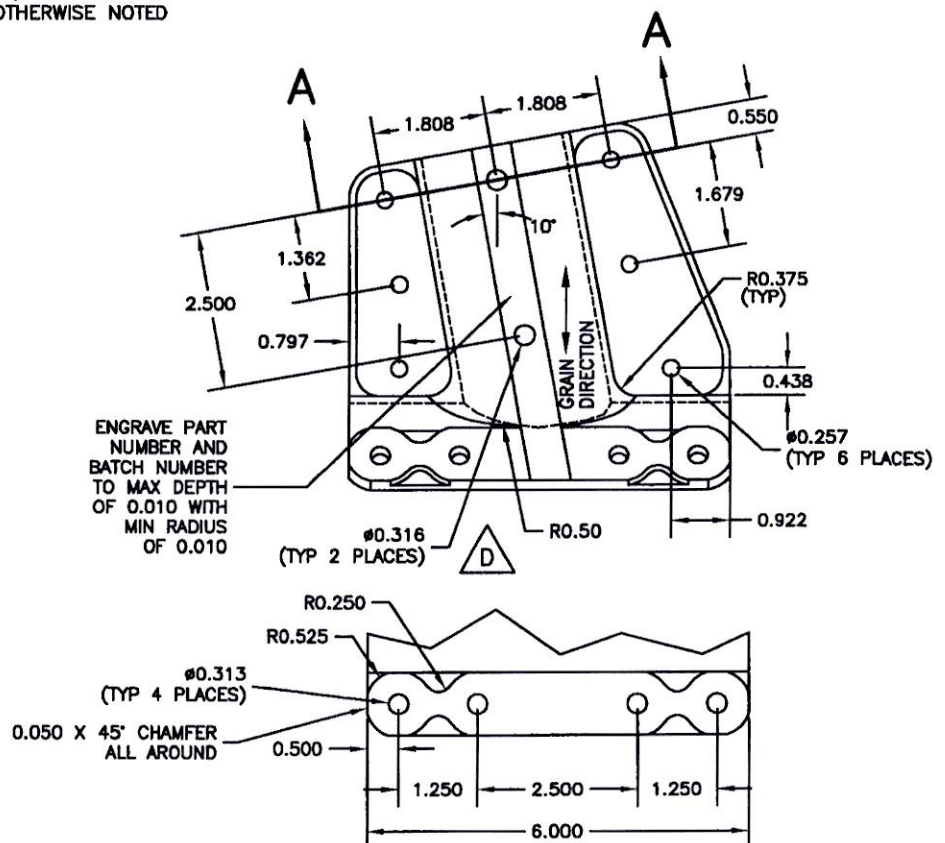
07-02-12 [Signature]

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 155587 M/L5
17-01-19



NOTES:

- 1) MATERIAL: ALUMINUM 7075-T7351 (QQ-A-250/12)
(MAKE FROM D6101-001 SADDLE BILLET, 7075)
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT GLOSS WHITE (4.3.5.1) PER DART QSI 005 4.3
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) BREAK ALL SHARP EDGES 0.010 TO 0.020
- 5) D2666-1 SHOWN (D2666-2 IS OPPOSITE)
- 6) ALL DIMENSIONS ARE IN INCHES

**D2666-1 SADDLE FWD INSIDE HIGH**

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